

Function of education on neuropsychological test performance (Indonesian Boston Naming Test, Verbal Fluency Test, and Token Test) among healthy adults in Indonesia



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INTRODUCTION

Development of The Indonesian Neuropsychological Test Battery Project (2016 – 2020): Memory & Learning, Language, Attention & Executive Functions.



A real challenge on developing normative scores of the Neuropsychological Tests for Indonesian population

About Indonesia:

- 1. 17,508 islands – the world biggest archipelagic country
- 2. 2016: 261 million
(4th most populous country in the world)
- 3. The number of individual languages listed for Indonesia is 726. Of these 272 are in trouble (no longer highly spoken), and 76 are dying. The remaining 378 are still highly spoken.



THE CURRENT RESEARCH

Previous studies have shown positive effect of education on cognitive processes. Higher education may reduce risks of age-related cognitive decline or disease. Neuropsychological tests can help assess cognitive-function that are linked to particular brain functions. The current research aimed at investigating demographic variables on the performance of neuropsychological-language tests, specifically on language domain tests (Boston Naming Test, Verbal Fluency Test, and Token Test).

METHODS

Across the three neuropsychological tests for language domain, education revealed significant interactions with the Indonesian BNT, VFT, and TT ($F(4,444) = 37,07, p < .001, \eta^2 = .25$; $F(4,444) = 17,17, p < .001, \eta^2 = .13$; $F(4,444) = 14,48, p < .001, \eta^2 = .11$, respectively). These results signify the importance of education on one's cognitive processes particularly language performance.

RESULTS

Participants were 490 adults (males = 194; females = 296), age ranged 16 to 80 years old ($M = 33,17$; $SD = 15,21$). Education were stratified into 5 levels (≤ 7 years of education; 7 -9 years of education; 10 -12 years of education; 13 – 16 years of education, > 22 years of education). Participants were administered the Indonesian BNT, Verbal Fluency Test, and Token Test. Univariate analysis was conducted to assess effects of demographic variables.